# AMERICAN CINEMATOGRAPHER

The Motion Picture CAMERA Magazine

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of Cinematographers

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## this issue



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# AMERICAN CINEMATOGRAPHER

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JOHN ARNOLD, President, A.S.C.
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**Volume 17 August, 1936 Number 8**


## What to Read



## Next Month

- Hal Mohr has devised a lens that gives both foreground and background focus. This is not a Universal Focus lens, but gives the cinematographer a bit more latitude in bringing into sharp relief objects at various distances from the camera.

- A startling innovation in make-up that will prove of interest to every studio and make-up man throughout the world.

- Other features pertinent to the work of cinematographers the world over.

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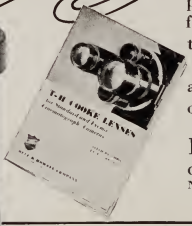


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# Newsreeling

NOW THAT THE Republican and Democratic national conventions are history and all participants presumably have survived the ordeals of oratory, the newsreel crews have had time to catch up on lost sleep and are able to review the hectic days. Always one of the big stories of any year for newsreel cameras, the conclaves this year received coverages far surpassing any previous record. Practically no event of any kind has been worked out in so elaborate detail of preparation.

With this thorough advance planning, we were able to get better shots and more of them, on floor and rostrum, to the result that there was a considerable increase in the footage actually released in all the newsreels.

Newsreels offer a potential audience of some eighty-seven million people a week. This is more than the distribution of any newspaper chain. It equals the circulation of any broadcasting network but with the double-edged appeal of both sight and sound. Realizing this, the two larger political campaign committees are convinced that newsreel audiences are well worth fighting for.

With the campaign now getting really hot and with both parties bringing all possible pressure to bear for publicity for their candidates, the newsreels have found it necessary to keep record of footage released on each party and balance one against the other in strict impartiality. While footage must be kept equal, there is no evening of the appeal of effectiveness of the various newsreel stories. Campaign experts, sensing this, have taken steps to get the best possible pictures made of their candidates' activities and hence obtain an edge to this audience.

To this end, the Republican National Committee back in February appointed two men, John Begg and Russ Worthington, each of veteran newsreel experience, to serve as contact men with the newsreels and to provide for their needs.

When the Philadelphia meeting got under way, a similar liasion was needed and at the request of all the newsreels, Edward Brown, of the Democratic National Committee's publicity staff, was rushed from Washington to act as contact between the convention committees and the cameramen.

Conditions at both conventions were much similar. The preliminary work at Cleveland was better, but at Philadelphia we had the advantage of the previous experience. As instance, we had more control over lights and avoided the Cleveland incident where we couldn't cut the lights above the rostrum and just about burned the speakers out of the stand.

Proper lighting of the huge halls was the first problem. With eighteen electricians, Charles Ross, of Motion Picture Lighting and Equipment Company, New York, set this stage. Mounted on stands in the balcony were eight 24-inch GE 150-ampere high-intensity arcs, each giving the equivalent of four million candlepower when spotted. Each was manned by an electrician and swept the entire auditorium.

Directly over the speakers' stand was a bank of eight 75-ampere 5-unit incandescent overhead strip lights, each equivalent to 100,000 candlepower. In addition, ten 5,000-watt incandescent solar spots, each equivaent to 66,000 candlepower, were suspended from a frame directly above and in front of the stand, in manner similar to that used in boxing rings.


# the Political Conventions

by
**W. P. Montague**
Assignment Editor, Paramount News

In reserve were ten portable lamps of 1,000 candlepower each which were used in working for close-ups around the hall or for spotting individual personages. Some 5,000 feet of feeder and stage cable with the necessary switchboards and spider-boxes were used. All of which comprises a lot of illumination in any party.

Four camera platforms were erected. The main stand jutted out about thirty feet on an angle from the balcony and was nearly 120 feet from the speakers' stand. At Philadelphia, this main stand was somewhat closer. It held seven sound cameras and complete crews including contact men. Lights were controlled from this point.

At the very top of the hall at the rear, some 280 feet from the rostrum, a second camera platform was put up giving full vision of the entire hall and particularly of the activities on the floor.

On each side of the rostrum, level with the speaker and affording head-on view of the hall, were smaller camera platforms on top of the broadcasting booths.

Each newsreel was also allowed roving permits allowing their silent cameras, hand and tripod models, to roam the vast auditoriums, but not the speakers' stage, seeking natural unposed close-ups of delegates and important personalities. These "Silent" crews scurried to excitement spots whenever new demonstrations or other colorful incidents were forthcoming.

Outside the halls, other camera-and-sound crews captur-

**At Top: Lighting of Philadelphia Convention Hall. Bottom: News men in balcony. Next Page: Lighting of Cleveland Hall.**


ed the color of the convention cities ond the arrival of notable figures.

Mainly, standard camera equipment was used; Mitchells for sound and Akeleys far silent shots. One of the Paramount men used a motor-driven DeVry to very good effect, working on the floors on equal terms with the still ond news men. At Philadelphia he obtained some beautiful condid-camera type of material of the President and his fomily. He used hyper-sensitized stock as he was working without any special lights. A supply of this negative was held in reserve by most of the reels, but mostly it wos their usual Super X that went thraugh the cameros.

Hearst Metrotone News had two 17-inch lenses on the scene and picked off screen-filling close-ups on the rostrum from both the distant camera set-ups. Generally speoking, light was ample to make ultrafast lenses unnecessary.

Both conventions provided completely furnished private offices in the halls to enable each newsreel to handle the mass of detail incidental to the job, alsa adequate darkrooms.

To the sound engineers went the task of laying seven and a half miles of cable in an intricate network serving the broadcasters as well as the cameras. For the first time in political history, a microphone was placed on the floor for each of the fifty-two delegations. These were under control of the permanent chairman through a speciolly designed panel board on the speakers' rostrum. Cables led off to the radio channels and to the cameras from this one centrol source. This system enabled the newsreels to pick up the delegrates no matter where they were speaking, which added much to the personalized interest of the stories and their sectional distribution.

An eloborate installation of individual telephone intercommunicotion kept camera crews, sound men and electricions in constant touch with the key contact officials who signalled when to hit the lights and shoot.

A good example of the high degree of co-ordination maintained between all the units is the Al Smith demonstration that broke out in one of the upper balconies at Philadelphia. Lights were so under control that it was possible to pour them into the disturbance immediately. In foct, so fast did the newsreel men work it was intimated afterword they hod an advance tip the demonstration was to take place. As a matter of fact, it was simply the perfect functioning of the well-planned arrangements which we hoped would cover any and all emergencies.

Copies of speeches were furnished each newsreel in advonce of their delivery. Not as early as we would liked to have had them, in some cases, but we were able to scan the copy for possible highlights and plan our work occordingly. This led to a considerable saving in negative.

Unlike other conventions, few special planes were needed. The air express people were well prepared and even had messengers on the camera platforms. A comeroman could hand an exposed mogazine right from his camero to the messenger without leaving his post and know it was on its rapid way to New York, Chicaga or the West Coast. Fram Cleveland, film was dropped into New York within four hours; fram Philadelphia, less than two hours.

Jack Flanagan, president of the Tri-State Film Laboratory, leading Cleveland film plant, opened his facilities to the newsreels. Several used them for exposure tests with material shot on Monday priar to the convention opening.

Paramount used the laboratory to get out local prints and to dupe the negative for practically simultaneous handling in Hollywood, Chicaga and New York.

Most of the men handling the convention were veterans of three or four previous affairs. Included were "Red" Felbinger, of Chicago; Jack Whipple, Lau Hutt, Al Mingalone, Douglas Dupant, Gene Boyd and Urban Santone, of New York; John Herrmann, of Byrd Expedition fame; Arthur DeTitta and Robert Denton, Washington contact men; and nearly a score of other very able camera and sound men.

The climax of the Democratic meeting wos, of course, the Fronklin Field ceremonies incidental to notification ot President Roosevelt of his nomination before upwards of 115,000 people. Here was an entirely different lighting and coveroge probelem.

Our good ally, Charles Ross, brought down from New York two generator trucks as there was not sufficient power in the stadium to handle lights covering the tremendous outdoor arena.

From these, he operated two 36-inch GE high intensity arcs, each drawing 150 amperes, mounted on a side platform and used to flood the field or to sweep the balconies. On the main camera platform, 85 feet distont from the President, were six 10,000 watt 24-inch sun spots strung

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# Why All This Hubbub Regarding Color?

WHAT'S all the shootin' for? Why the current beating of drums and hullabaloo about color films? How prophetic are paragraphs in the public prints that black-and-white is soon to be a rara avis, an historic museum piece, a quaint and curious custom of an out-moded era? In fine, how substantial is the prevailing renaissance of color? What is the true, unvarnished opinion of the industry of color's present and future place in motion picture production?

In the endeavor to sift this contraversial subject, The American Cinematographer has done a bit of pointed probing. In the guise of an Inquiring Reporter, it has obtained true, aff-the-record opinions and observations from infarmed factors qualified to reveal views of the industry's many branches.

Returns indicate that practitioners of the black-and-white art need not requisition a wailing wall for immediate usage nor anticipate approaching days of famine. Ta the cantrary, the multiple-hued films appear mainly to have enhanced appreciation for the superlative artistic and dramatic creations that have been evolved in monochrome.

Studio executives are loath to speak out loud on the color situation ather than in farmal approbative tones. That is good policy. Next week, exigencies of production schedules may toss a calor film in their laps for manufacture. The same applies all the way down the line. No one cares to ga on record. Tomorrow's task may be a calor assignment; and a job's a job in any color.

But their hearts are not in these public color puffs composed far exploitatian purposes. There appear to be several prime reasons for this chill. Many are based an manifest limitations of available color processes under actual praductian conditions.

Daing a feature in color may add anywhere from one to three or more hundred thousand dollars to the cost sheets. Every stage af production is slawer and results are none too certain. There are elaborate tests af materials, fabrics, textiles, cloths. paints, stains, enamels, washes and other piamented substances ta establish results af light reflected from these colored surfaces on film undergoing the pracess in question.

Juxtaposition af calors, the effect of one color on another, the tendency of "strong" colors to dominate "weak" colors, are matters for tests with actual materials to determine. Reflected color plays queer and totally unexpected tricks, and at unexpected moments. It is not, at this stage of the game, a contrallable quantity in the sense that light-and-shadow is.

Increased electrical consumption, longer shooting schedules with langer salary outlays, higher percentage of retakes, expensive daily rushes in color, intricate and variable laboratory processing in the hands of an outside third party, are a few of the budget-eating items.

Libraries of stock shots in color are as nothing compared with black-and-white. Nor can the delicate color be altered to fit into production shots.

Hence any known color process has definite limits of production possibilities. Story, cast, sets, wardrobe—every item involved—must be whittled down to the narrow capabilities of the process. It is far distant from being a universal or all-inclusive medium at present stages of development.

With all this outlay of finance and talent, is the finished color product warth it all in terms of audience appeal, entertainment value, box office return and eventual net profit? A tour of representative press critics, exhibitors and lay ticket-buying film viewers evokes few cheers for the rainbow division.

Consensus is that color as a novelty has the exploitation value of any other bax office novelty. And there it ends. A feature-length dramatic screen offering in color is a glorious technical triumph of madern science. The curious hastened to attend. They gave eye to the spectacle, the miracle—it could be done!

They saw calor and lots of it. Color fairly screamed from the screen and smacked them in the eyes. Color enthusiasts self-consciously were determined ta prove that color could be photagraphed. And photagraph it they did, to the partial eclipse of drama af story or action. This emphasis an photography is an old gag. Any competent Director of Photography could, if he were so short-sighted, make his black-and-white photography so dominant in artistic content as to steal the picture. But he knows better.

In "The Trail of a Lanesome Pine," Walter Wanger used every effart to keep color subdued into its proper place. The process battled him on every point. Even so, the proud boast of his producing staff, which is confirmed by theater-goers, is that after the first few minutes the audience last itself in the unfalding story and became unaware of the calor. Then why color? Other than far its timely exploitation and novelty appeal?

Critical reviewers confess their disappaintment in constant appearance of calars untrue ta the photagraphed subjects. The processes lack repraductive color fidelity, it seems. Flesh tanes are noticeably unfaithful and many times unflattering. Women spectatars in particular hit on this shortcoming.

An haur or more of color, they hold, is too much color at one sitting. It is satiating, tiring. Eyes are accustamed to reading from black against white. Books, magazines and newspapers are not printed in vari-colared inks. And projected color is not the same as reflected color.

The scene is "pretty," but not convincing. It may even be "beautiful," but lacking truth and realism. Hence the objections to features do not always fit short subjects. After an hour or two of black-and-white, ten to twenty minutes of color comes as a pleasant and enjayable change. Especially where fidelity of color is not vital. A calar scenic need not exactly convey truthful hues; the audience has never seen the original for comparison.

There are projection problems. Intensity of screen color hinges an the theater. It is nat the same with a long "throw" as with a short one. Release prints may or may not be uniform in color content.

Inclusion of color stifles the greatest of audience reactions; it does not stimulate the imagination. Color, of

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Wm. Mellor, A.S.C.

self to the technique of confining dramatic narratives to small squares of sensitized celluloid. This long interneship term was climaxed by his participation in the filming of "Cleopatra," which brought the Academy Award for photography to Milner for the 1934 production year.

Then came his elevation to the full office of Director of Photography.

It is well that young men aspire to the profession of cinematography and, as in Mellor's case, are willing to devote long apprenticeship periods to achieve practicing degrees. Soundly and rigorously trained as members of other professional callings, they bring to the art new vigor, enthusiasms, and artistic courage plus their thorough grounding in time-tested technique.

And it is well that far-sighted studios hold forth this encouragement to technicians now in minor posts who so anonymously take hand in processing departments. Beyond doubt, here are the top-rank cinematographers of the future.

# William Mellor Wins Rating with Oldsters

by
**Harry Burdick**

WHEN Hollywood's younger generation of ace cinematographers is censused, the name of William C. Mellor, A.S.C., must perforce be top-bracketed. Indeed, if the compilation be a chronological one he would be the lead-off member, for in years he is the youngest local practitioner of the cinematographic profession. He tips the age scales at a fraction over thirty-three.

But the comparative paucity of his years has no reflection in the dimensions of the celluloid creations that emerge from his camera. Productions of first magnitude are entrusted to his talents and properly, for he has long since evidenced his capacity for rendering cinematic documents that stand the test of carping critics professional and public.

He is a product of the Paramount lot, an alumnus of its laboratory. In this stern school he learned from long hours of first-hand contact the idiosyncrasies of negative following divorce from its camera. As an academy leading to post-graduate cinematographic activities, work in the laboratory is hard to beat. It provides a practical foundation obtainable from no other source.

Mellor still takes advantage of his earlier laboratory affiliations. Each morning at seven-thirty, during periods of production, he visits the laboratory and there inspects rushes from the day previous. Seven-thirty is practically the middle of the night for late-working studio personnel. But seeing rushes at that hour means any corrective measures so revealed can be put into effect that very day, which spells for greater uniformify of excellence in finished product. He finds the investment of early hours amply justified by ultimate results.

Emerging from the confines of the laboratory some dozen years back, Mellor won a position as Assistant and then Operative Cinematographer under the guiding genius of Victor Milner, A.S.C. Manipulating camera mechanics under so able a master of the craft is a happy experience and intensive training for any ambitious artist and technician.

He took advantage to fullest extent of this marvelous mentoring opportunity. Year after year he applied himself to the technique of confining dramatic narratives to small squares of sensitized celluloid. This long interneship term was climaxed by his participation in the filming of "Cleopatra," which brought the Academy Award for photography to Milner for the 1934 production year.

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During his relatively short stewardship of complete camera responsibilities, Mellor has evidenced a surprisingly wide range of creative capabilities. There is little liability of his being tabbed or labeled as a man of single-track abilities.

Currently he is lensing "Champagne Waltz," an opus calling for the histrionics of Gladys Swarthout of operatic renown. A production of impressive proportions; but he progresses its filming with all the calm confidence and assurance of a quarter-century veteran.

It is a Viennese operetta dealing with the transplanting of a Yankee jazz orchestra to a cafe adjoining the historic Waltz Palace. Here is delicate mood in soft high key, and one quite difficult to keep in precise balance.

Of especial note is Mellor's adaptation of mood to interpret musical levels. As orchestrations shift from dreamy and seductive Viennese waltzes to strident syncopation, so does his mood alter in subtle manner. There is mood, Mellor feels, for varying degrees of intensity in musical expression just as there is in range of dramatic rendition. His application of light as an accompaniment to musical scores opens new fields for modern interpretation of blended arts.

Now showing is his previous work, "Poppy," a gay and sparkling comedy portraying the inimitable W. C. Fields. As with most comedies, it is in high key that audiences may not miss a single amusing gesture. Here, more than

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# Ultra Violet Recording With "Black Light"

by
**William Stull, A.S.C.**

THE ORIGIN of many a revolutionary invention may be traced to the fact that the inventor noticed some insignificant detail to which nobody else gave a thought. The development of RCA's new method of recording sound with ultra-violet light is based on an engineer's ability to notice just such a routine detail. For quite a number of years we have recorded sound on film; on a film coated with a speeded-up positive type of emulsion, to be exact. Long before talking pictures were thought of, engineers and practical photographers alike had known that such emulsions were most strongly sensitive to the blue, violet and ultra-violet components of light. And we had also known that the emulsion itself forms a sort of filter which prevents the ultra-violet rays from penetrating deeply. But nobody thought of putting these facts together in the interests of better sound.

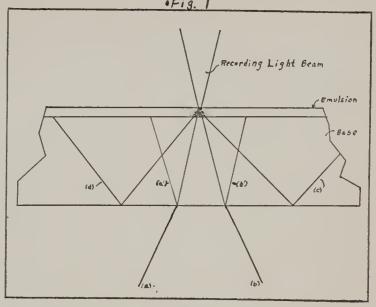
At least, nobody thought of it until Engineer Glenn L. Dimmick, looking for a means of producing a cleaner sound-track, put two and two together and found that they didn't make three.

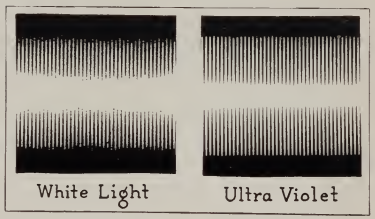
In recording sound on film, one of the most important considerations is a cleanly-defined sound-track. The vibrations which make up the basic pitch of any sound may not in themselves be of a particularly high frequency, but the overtones and harmonics, which determine the character of the sound may be of very high frequency. Recording sound on film either with the striated track of the variable density systems or with the serrated track of the variable area methods, these high frequencies are represented by microscopically fine differences in photographic density. With RCA's variable area record, the sound is recorded as a double raw of fine, saw-tooth serrations; extremely high frequencies record with such minutely fine serrations that the track must be magnified many times to appear as coarse as a fine-tooth camb. To achieve a really clear record, the valleys between the peaks of these fine serrations must be kept clear, far if the serrations are not clearly defined, the saund record loses its clarity, and the overtones disappear.

Perhaps the commonest cause of such trouble is ordinary photographic fogging of the film. The recorder imprints the picture of the high-frequency wave-form on the film, but when the film is developed, the line of demarcation between the exposed and unexposed sections (especially at the base of the serrations) is nat clear. As a result, the track does not contain the higher frequencies desired, and the reproduced sound is "fuzzy", and of imperfect quality.

This much was well known when Dimmick started his investigations. Assuming that the recorder itself was blameless, he analyzed the action of the recording light-beam on the film. He soon found that the film's emulsion inherently tended to spread or diffuse the recording light beam, as shown in Figure 1. This beam is focused on the surface of the film, and gives a tiny bar of light which is .00075" wide. Since the surface of the film is the focal point of this beam, it must inevitably start spreading beyond this point, so that the bottom of the emulsion is exposed over a wider area than the top. Moreover, the silver grains suspended in the emulsion tend to diffuse the light still more, exposing a yet wider area. That would be bad enough, but there are further complications. Passing through the emulsian, the recording-beam travels thraugh the celluloid support, being bent slightly by refraction at each surface, and continues in the broader beam bounded by lines "a" and "b".

*Fig. 1




**Sound Track of 9000 Frequency Tone**

At this point, a factor familiar to every photographer enters the problem. This is halation. Not all of the beam passes through the film-base; part of it is reflected upward again, as indicated by "a" and "b". When this light reaches the emulsion, it produces a secondary exposure over a broad area, giving an effect very similar to the halation which so long troubled phatagraphers, and clouding the finer gradations af the sound-track.

Moreover, the dispersed rays of the beam, spread apart by the diffusing actian of the silver grains, travel through the base and alsa reflect upward as shown by "c" and "d", and add a secondary fogging effect.

Clearly, the answer to this problem, Dimmick reasoned, would be something that prevented the light of the recording beam from penetrating through the emulsion. If the beam could be made ta penetrate just deep enough to give a clear, well-defined image of the recording-slit, and then stop, all the traubles due to diffusion and halation would be eliminated. The photographed picture of the sound-wave would be cleanly defined; the high frequencies

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Charles A. Marshall, A.S.C.

# Shooting Thrills Has Its Exciting Moments

by
**Charles A. Marshall, A.S.C.**

BEING a stunt cinematographer has its thrills—and its recompenses. For one thing, the life insurance agents don't pester me. In making oir shots almost anything can happen—and usually does at the most unexpected moment. As the saying goes, it's great fun if you live through it.

We were making "West Point of the Air" for Metro-Goldwyn-Mayer in 1934 at Randolph Field. I figured out what I thought would be an effective style to introduce the locale. On the ground, in white letters fifteen feet toll, is the name RANDOLPH FIELD. I arronged to have a formation of forty-eight planes fly above these letters. From another plane, higher and flying at a slight downword angle, I was shooting head-on catching the impressive air armada and its shadows on the ground.

As the rear plane passed beneath us, my plane was to nose down enobling the camera to pick up the letters displayed below. Rather an effective way of opening the picture, we reckoned.

All went well with the exception of a slight deviation from originol plans. My pilot got ahead of schedule. Eyes glued to his sights centered on the ground letters, he forgot all about the cluster of planes below him and went into his nose-dive while the air was still densely populated in the lower level. Down he went, roaring into the center of that speeding formation. He wasn't aware of what he was driving into but the same can't be said for me.

From my perch in the rear cockpit I had complete and unobstructed view of the situation. I was hurtling nearly straight down at the rate of one hundred and sixty miles an hour. Some eighteen formation planes doing ninety still were to cross our projected line of descent.

There was nothing I could do about it. A mere five hundred feet of altitude made recourse to parachute out of consideration. So I sat there—for the split seconds that seemed hours. Motors of the other planes roared in my ears, drowning out sound of my own ship. I braced myself for the shock of collision. My ear-drums tensed to withstand the impending nose-on crash of wood, metal and fabric.

Somehow, we filtered through that blanket of planes. We missed one by not more than five feet; I could have reached out and grabbed its ailerons.

My pilot leveled out and turned his head for my approving nod. But I wasn't nodding just then. When we landed, I patiently explained that cameras are expensive and the studio would be greatly perturbed to lose one just because of some pilot's quaint desire to have two planes occupy the same area of air at the same time. Then we went up again and made the shot as scheduled.

There's the superstitious adage regarding unpleasant events being bracketed in threesomes. I don't believe it, but—

Next evening we were making tests with two-hundred-and-fifty-thousand candlepower flares. As we were rolling down the take-off strip at some fifty miles an hour, one of them slipped from place and ignited just about two feet back of my neck. I didn't tarry to investigate the matter. I went awoy from there—out of the cockpit headfirst, rolled over on the ground a few times and watched the fire crew extinguish the blaze.

On the following day, my pilot ground-looped while landing. Gasoline tanks ruptured. I extricated myself and raced through knee-high pools of gasoline to a nearby watertank. It required no effort to recall what happens when a spark hits exposed gasoline.

But we carried on merrily and in due course the film hit the world's screens.

"Hell Divers" provided its quota of thrills, but ot different kind. At three-hundred miles an hour we made vertical power dives from twelve thousand feet down to about one thousand. I stood in the rear cockpit manipulating the camera. We made twenty-five of these dives before we hod just the picture wanted. The first dozen were somewhat hair-raising, I confess.

Like the fisherman, I maintain my best shot got away from me. We were at Honolulu doing "Hell Below." My assignment was to film a navy bombing-plane letting go two giant bombs. Dummy sandbags were loaded on and we cruised in search of suitable background of cloud formations. The skies were especially bountiful that day. Each setting seemed better than the other. In the distance I spied o cloud and light combination that beggars

Continued on page 336

# Make-up for the New Technicolor Process

An Interview with
**Max Factor**

MOTION picture make-up has never been merely an end, but rather a means to an end. The one and only reason for using make-up is to help the camera reproduce the features and complexion of the player upon the screen in a natural and pleasing manner. Its purpose is to equalize irregularities and to conceal blemishes.

Now that Technicolor's three-color process is enabling us to bring our pictures to the screen in color, a new conception of make-up becomes necessary. Where in monochrome it was sufficient to make up our players with a range of colors which produced a photographic result approximating a black-and-white rendition of normal skin-textures, in color, we must apply a make-up which, through all the intricate manipulations of color-photography and processing, will reach the screen as an absolutely accurate reproduction of both the texture and the coloring of a living face.

The familiar range of "Panchromatic" make-up materials are all based on a range of warm browns, which photograph as a scale of intermediate grays. Closely akin to these products were the make-up materials for the old two-color Technicolor: these also were warm browns, but of a much warmer—or redder—hue.

Neither of these would do for the new three-color process, which is not color-blind as were its predecessors.

The inevitable first thought in such a situation is that our make-up must now duplicate the actual coloration of the human skin. Snap-judgment hazards the guess that somewhere among existing theatrical and street make-up materials, we ought to find the answer—for do we not want to make our player appear as in real life?

Unfortunately, tests have proven that these make-ups will not suit the color-camera. Analysis shows them to be based on some combination of varying shades of pink, yellow and white. Such a make-up, well applied, may look very nice to the eye, but the more critical color camera unmasks it for the glaringly unnatural thing it is. On the screen, the white is too white; the pink is too pink; and the yellow, instead of blending into what we think of as a flesh-tone, becomes pasty.

Analyzing the human complexion with a spectroscope, we find that the darker pinks are present—or to be strictly honest, reds—certain proportions of yellow, white and blue. This is probably true because of the fact that the skin itself is essentially a translucent covering, with relatively little color of its own, but influenced enormously by the combination of that trifle of coloring and the true color of the flesh-and-blood beneath.

So our color make-up must blend the reds, yellows, whites and blues. Pure whites, of course, should be avoided for the elementary reason, long familiar to photographers, that it simply throws back a characterless glare, and contributes only artificiality to the picture.

Moreover, our new make-up should be extremely thin, so that faces do not have a plastered, "made-up" appearance.

The new Technicolor make-up, known as the "T-D" series, embodies these characteristics. The colors are scientific duplications of natural skin-tones, subdued to fit the limitations of the color camera. The foundation make-up itself is enormously different from previous conceptions. Instead of being a paste, it is a liquid, in which the pigments are held in colloidal suspension. It forms a microscopically thin, but none the less effective coating which partakes of the natural translucency of the skin.

And how is this color make-up applied?

First, a liquid foundation of the proper shade is applied. This foundation-coating must be as thin as possible. To one accustomed to the routine methods of old-style make-up, this thin foundation comes as a shock. But the new material, unlike the old, does not do its work with mere thickness. On "The Trail of the Lonesome Pine" and "Dancing Pirate," we definitely proved that the thinnest applications of the new foundation gave immeasurably more natural results than conventionally thick coatings of the older foundation colors.

Over this foundation, powder is applied to eliminate any trace of the oily sheen which would photograph as an unnatural glare. Contrary to conventional practice, the powder used is always of the same shade as the foundation. Since the foundation forms only a minutely thin coating, the natural oily excretion of the skin passes easily through it, and this natural oiliness is counteracted, not by any attempts to prevent the condition (which is a purely natural function), but by frequent application of powder.

The lip and face rouges are of an absolutely new type. They have been scientifically compounded to reproduce natural coloring, with due consideration of the requirements of the Technicolor process. They are, like the foundation and powder, of spectroscopically exact shades, properly modified for the color camera. Obviously, for natural-color photography, the rouges must be applied with extreme skill, blended in so that they enhance the appearance without revealing the artifice.

The make-up of the eyes, brows and lashes is substantially the same as for black-and-white, with the exception that wholly natural colorings must be used, and that less opportunity for cosmetic trickery is possible. Artificial lashes may be used, for today's technique in such make-up has been perfected to a point where neither the camera nor the eye can detect the artifice. On the other hand, a player with invisible blonde eyebrows, which can often be accentuated by black-and-white make-up, had better give up all hope of appearing in color films, for the color camera unerringly discloses any attempts at correcting invisible brows.

In much the same way, shaded or "modeling" make-up, which has been developed to a high perfection for black-and-white, loses much of its value in color. In monochrome, we can create artificial highlight and shadow

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# A.S.C. MEMBERS ON PARADE

• **A.S.C. STAG PARTY.** What a party it was. Held at the Breakfast Club on the night of July 20th and for members only.

Every member of the American Society of Cinematographers who was not working on a production that night was present.

In addition to the dinner there was a fine bill of entertainment headed and abetted by Leon Errol. Errol did his famous drunk act but Fred Jackman did not sing Aloha.

While the last act was finished a little before midnight, the last member did not leave the club much before two in the morning. Some appreciated the entertainment so much they decided to entertain the entertainers after the show was over.

A bit of irony was the fact that James Van Trees, a member of the arrangement committee, could not attend because of shooting on his picture went far into the night.

One of the entertainers thought Dr. H. Meyer of Agfa a medical doctor, and explained innumerable symptoms to determine what the ailment might be. The doctor decided it was too much gamma.

We were surprised to notice that color was mentioned and argued very little among the men.

It was a great night. Skoll!!

• **Karl Freund, A.S.C.,** has decided not to take his vacation in China as originally planned. It will not be necessary as M.G.M. has given him charge of the cameras of "Good Earth."

• **Jae Walker** has gone "Scott," all of which means he is another of the long distance radio fans and has accumulated an all-wave Scott radio. Five o'clock calls mean nothing to him as he is still up.

• **Bert Glennon, A. S. C.,** and **Dan Clark, A.S.C.,** were both too busy shooting night scenes out at 20th Century-Fox to attend the party.

• **Barney McGill, A.S.C.,** is out of the hospital after a successful operation. He is roaming around the Fox lot getting his strength back preparatory to shooting a picture.

• Among those sitting in the ballheaded row for the A.S.C. show were Len Smith, Eddie Blackburn, Ray Fernstrom, H. F. Koenekamp. There were more, but we didn't hear them.

• **John Hermann, A.S.C.,** is being showered with honors. He was elected a Fellow of the Royal Photographic Society of Great Britain. He has been notified by Admiral Byrd that he was one of the members of the Byrd Antarctic Expedition to be voted a Congressional Medal, which will be presented to him in the next few months.

• **Vern Walker, A.S.C.,** head of R.K.O. Special Effects Department could not attend the party. He was figuring out a couple of "flabbergasters" to startle the audiences on a forthcoming release.

• **John Dored, A.S.C.,** received a plaque for the best foreign coverage on the scenes at Addis Ababa following the flight of Hailie Salassie.

• **Alfred Gilkes, A.S.C.,** left last week for London to photograph the Edward G. Robinson picture for Atlantic Films.

• **Frank Good, A.S.C.,** is busy hopping from major studio to major studio. Frank is much in demand. Not long ago he was called in for some very special work at Paramount. He then returned to film the George O'Brien picture for 20th Century release and just finished "Three in Eden" at Warners. From there he is scheduled for R.K.O. to shoot a George O'Brien and then back to Warners.

• **There are Nine A.S.C.** members shooting in England right now. John W. Boyle for Associated Talking Pictures, Edward J. Cohen with London Films, Lloyd Knechtel doing independent Trick and Process Photography, Glen McWilliams with Gaumont British, Alfred Gilkes with Atlantic Films, John Silver with Technicolor Ltd., James Howe and Charles Kosher with London Films and Willard VanderVeer.

Other A. S. C. cameramen operating on foreign soil are George Benoit, Paris, France; John Dored in Wien, Austria; Paul Perry with the Franklin Granville Expeditions in India; Harry Perry in Continental Europe for Goldwyn Co.; Ariel Varges in Tokyo, Japan; Charles W. Herbert around the world for "March of Time"; Lauren Draper in Mexico City with Clasa Studios, and James B. Shackleford in China with Tay Garnett.

• **Reed N. Haythorne, A.S.C.,** who is associated with the National Archives is conducting a survey of all motion picture films of the United States Government. He has been able to secure film for members and studios from the archives of the United States Government. Haythorne wants the members to know that he can act as their contact man for film in the government archives, such as World War Films, etc. Haythorne in the past specialized on expeditionary photography, travelogs, serial work and scientific education pictures as well as background work. He states he can do background work for those needing it of scenes in and around Washington, D.C. He can be addressed care of National Archives, Washington, D.C.

# Makeup for the New Technicolor Process

Continued from page 331

areas with make-up, thereby simplifying the cinematographer's task of modelling the face. In color, such shadings generaly appear merey spotty. A certain amount of such correction may at times be achieved, but this technique, in general, is of little use in color.

Speaking broadly, natural-color photography brings an entirely new conception of make-up technique. In black-and-white, we are working with contrasts of monochrome light and shade. Accordingly, when making up a blonde, we seek to heighten that tonal contrast by applying a rather dark make-up which will give a positive contrast to the lighter hair. In color, this is not the case; a blonde or a brunette would use a make-up of a color in keeping with her own complexion. This is because we are no longer striving for a purely artificial contrast, but seeking to imitate and enhance the subject's natural coloring.

Since our make-up is intended merely to duplicate, in tones the color-camera can interpret, the coloring of the underlying complexion, adding only to smooth photogenic texture which conceals blemishes, we prefer to make little, if any, change in the fundamental coloration. If we have, for instance, a prettily pink-and-white blonde, we strive to reproduce that natural coloring in the make-up, rather than to alter it. If we have a suntanned brunette, we likewise try to give the camera a make-up which it will interpret as a perfect reproduction of that natural tone.

Within limited degrees, however, Technicolor make-up can compensate for day-to-day variations in complexion. If our pink-and-white star should return from a weekend at Palm Springs with a noticeable sunburn, for instance, make-up can be depended upon to keep her coloring consistent throughout the picture. A severe tan, on the other hand, would probably call for a definite skin-bleach rather than a different colored make-up.

The so-called "character" make-up is equally possible in color. But it will require a new delicacy. Other than the application of wigs and beards, which have reached incredible perfection of late, the time-honored tricks of character make-up do not fool the color camera. The Lon Chaneys and the Boris Karloffs of color chillers can no longer draw their characters with broad, splashing strokes, but must point them by delicate touches as precise as the stroke of a miniature-painter's brush.

The make-up materials for the new Technicolor make-up are officially known as the "T-D" series, and like all modern make-up materials are furnished in a wide range of shades from extremely light to extremely dark, but all based on equally-spaced gradations of the same chromatic combination. The numbering of these shades is from 1 to 12. Special make-ups for racial groups are also being made. "Dancing Pirate" brought forth a make-up for swarthy Mexicans; "The Garden of Allah" has resulted in make-up for Arab types; "Ramona" called for make-up that would make Indians (real and synthetic) look convincing. In each case, the knowledge already gained in developing the regular color make-up enabled us, after quick spectroscopic analysis of genuine complexions of these types, to produce a make-up that gave the right effect. In addition, make-ups have already been devised for South Sea Islanders, Eskimos, Negroes, Orientals, and other types. Ultimately, one will be able to call upon his Make-Up Artist for anything from a Negro to an Albino, with confidence that the make-up will not only be correct, but that it will suit the intricacies of the Technicolor process so perfectly that the resulting character willl look perfectly convincing in the screened color picture.

# Why All this Hubbub Regarding Color?

Continued from page 327

itself, will not impart dramatic punch. Mood is limited in range. There are no rich, full-bodied blacks to give depth of emotion.

Individuals have definite color prejudices. One may have emphatic antipathy for greens in wearing apparel. If the star appears in a gown of green, his sympathy is immediately alienated.

One feature in color, or a dozen, may make money justifying the production tribulations and outlays. By box office measurement, an occasional musical or spectacle or fantasy may pay dividends from injection of color. But for day-in and day-out life-blood of the industry, black-and-white appears to be firmly entrenched.

Would "The Informer" have been a better, or so good, a picture in color? Would "The Thin Man" have packed

the same wallop? Would "Mutiny on the Bounty" have been so effective in all-color—even granting that any color process could have shot it.

The revolutionizing powers of color appear to be somewhat overdrawn. Comparison to advent of sound in studio practice is not able analogy. Dialogue pushed back the horizon of screen possibilities and dramatic construction. Color, by any process commercially offered, hampers and restricts that boundary.

There is unearthed no cause for alarm that current cinematographers of the light-and-shadow school will be reduced either to the status of mendicants or recorders of established color scales. Black-and-white photography is, and every indication shows it will continue to be, the industry's one staple commodity.



# Ultra-Violet Recording With Black Light

Continued from page 329

would not be lost, and the clarity and quality of the sound would be vastly bettered.

Knowing that the emulsion was strongly sensitive to the ultra-violet rays, Dimmick experimented to see how deeply such rays would penetrate. By the simple expedient of exposing two films, back to back, in a recorder fitted with a filter that removed all but the ultra-violet rays, he found that the emulsion of the top film very effectively held back the rays from exposing the lower film.

Experimenting further, he found that in normal recording, using only ultra-violet light, the filtering action of the emulsion confined most of the exposure to the top half of the emulsion, almost completely eliminating spreading or diffusing of the beam, and wholly eliminating the halation-fogging. Under the microscope, the sound-track serrations were seen to be far more clear-cut. In the reproduced sound, the vital high frequencies gave clear evidence of their presence, in better and clearer quality.

Applying this system to practical recording proves unbelievably simple. The light-wave-length chosen (3900 A.), while definitely in the ultra-violet band, passes easily through most types of glass. Therefore the regular Photophone optical system can be used unchanged. Special exciter-lamp globes are advisable, bulbs designed to radiate the desired wave-length with particular freedom. The one major additon to the system is a filter which removes all but the ultra-violet rays. This filter has the characteristics of a conventional 2" glass filter, .055" thick, the Corning No. 584. It appears almost completely opaque visually, yet transmits over 85% of the invisible ultra-violet light. This filter is placed, for convenience, directly in front of the microscope system which focuses the recording beam on the film, and behind the visual monitoring screen. Thus the recordist may check his record visually in the usual manner even though the actual recording is done by invisible light.

The improvement in the definition of the record is shown in Figure 3, which compares micrographs of a normal "white light" record of a 9000 cycle frequency tone with an ultra-violet record of the same tone. The fogging at the base of the serrations in the white light record, and the lack of definition at the peaks, is clearly shown. The more clear-cut ultra-violet record speaks for itself.

The practical value of this new system may be summed up by the words "more natural sound." With the higher

frequencies present, all sounds reproduce with greater naturolness. The quality that differentiates ane person's voice from onother's is more evident; the sibilant-sounds no longer hiss like an angry snake. Speech and music are rounder, more lifelike.

Ultra-violet light is equally odvantageous in printing the sound-track; indeed, the RCA engineers recommend its use. As in recording, the only change involved is the use of a small filter, which eliminates the slight fog which occurs in the printing operation. Since the printing beam is usually parallel, rather than a focused beam, there is rather less of this to contend with in printing, but it is always well to moke the print as nearly as possible a perfect copy of the originol negative. And printing on ultra-violet recording by ultra-violet light results in a measurable improvement in print quality, ond hence in the quality of the reproduced saund. It would oppear, incidentally, thot the use of ultra-violet light in printing might offer a field for fruitful research in processing picture-film, as well os it has in handling accompanying sound.

Ultra-violet recording is applicable to either the earlier types of recarder ar the most modern "High Fidelity" and push-pull types. Extending the usable frequency-range as it does to 10,000 cycles or more, it admittedly pushes the quality of sound that can be put on film beyond the capocity of many alder reproducers. But since more and more theatres are re-equipping with modern "High Fidelity" and "Wide Range" saund systems, the commerciol need for better recording is growing steadily. And, as the RCA engineers point out, even on an indifferent phanograph, o really good record always sounds better than a poor one.

## William Mellor Wins Rating With Oldsters

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in any other picture, Mellor's long steeping in practicalities of prevailing production carried him safely aver trying handicaps an the set.

Fields was ill. The moment the finol scene was filmed, he departed for the hospital. It meant that his energy must be conserved. Through the picture, Mellor never called upon him to stand before the camera for final lighting. Yet so complete was Mellor's mastery of the situation that screening betrays no indication of this lapse from usual procedure.

More, there were no second takes for photographic protection. Technically and artistically, every scene had to be perfect without recaurse. Functioning under this uncommon pressure, Mellor sped negative into the laboratory day after day with scarcely a delay attributable to the star's indisposition.

About to be previewed is his preceding effort, "Son Come Home," a story of heavy dramatic content.

And so we see him, in the caurse of a few weeks, expressing his versatility in drama to comedy to operetta—all productions of major listings. Surely, an exposition of creative flexibility!

Beyond a full comprehension of the tools of his trade—the mechanics and chemistries of cinematographic composition—lies Mellor's conception of the duty of motion picture photography.

It must be of technical merit to conform with studio standards. It must be of pictorial merit to answer artistic demands. But it must, over all, contribute to the story's recitotion. It must unobtrusively ploy a strong supporting role in enhoncement of story, star and setting. It must bid for na curtoin colls. For, as he puts it, photography the public sees is poar photography regardless of all other considerations.

This true and broad conception of the cinematographer's role leads him to impart the indefinoble quality of fine entertainment volue to pictures he makes. Which item, in the final onalysis, is the commodity studios are fashioning.

His photography does not play to the grandstand. Oppositely, it is never af rubber-stamp variety. And no reviewer has yet pilloried it with the awful adjective—"adequate."

## Shooting Thrills Has Its Exciting Moments

Continued from page 330

description. We headed for it and maneuvered the navy plane into shootable position. It was a breath-takingly gorgeous scene. It was of beauty to make audiences gasp. I started my camera and signaled the navy pilot to release the sandbag bombs. Nothing happened. Again I signalled, frantically. No response. The planes flew out of the setting.

Then I noticed the navy pilot gesturing, pointing downward. I turned my eyes down and found out why he hod not released the bombs as instructed. He was squarely over the business district of Honolulu!

This same picture contributed my

most squeamish experience, and it was in water rather than air. A camera was mounted on the "A" Frame of a submarine above the conning tower. I stood beside it shooting forward along the length of deck to its bow and the open sea beyond. The sub drove forward and gradually submerged. Water washed over the deck. I kept the camera turning until the sea was above my waist and open water was on all sides.

Of all the sickish, mean and thoroughly uncomfortable feelings, I pick the experience of having a boat-deck slowly sink away under foot. Definitely, I do not care to be shipwrecked after that incident.

I like this business of stunt cinematography. Every assignment is a thrilling adventure. There is no drab repetitious monotony. In the main, it is not nearly so thrilling as it seems. I stand up in an open cockpit operating a camera in a plummeting three-hundred-mile-an-hour plane just about as casually as when on a stage floor.

Producers are still striving to create new filmed thrills. Situations are evolved calling for close-up air maneuvering. We are working closer than ever before, and therein lie the faster heartbeats for audiences—and the cinematographer.

Stars may work comfortably on sets before background transparencies. But screen, you may be sure the camera and the aerial cinematographer were in the whatever air thrills you take from the hottest spot of the excitment.

## Newsreeling the Political Conventions

Continued from page 326

up on poles. These were swivelled around to augument the arcs turned on the crowd.

As an emergency, a strip of 20,000-watt lights was placed directly over the President's platform.

The main camera platform was built directly in the center of Franklin Field and only 85 feet from the speakers' stand. It was some eighteen feet high and of steel tubing so as not to interfere with delegates' view. Another camera platform was thrown up near the big arcs at the side of the field, some 140 feet from the speakers. These cameras could pan across the entire field as well as cover the speakers.

At the extreme back of the topmost balcony was another platform enabling the cameras to sweep the entire stadium. President Roosevelt has always appreciated the widespread distribution of newsreels, was most considerate and

the shooting of the great demonstration ran like clockwork.

Paramount and Pathe gave the story special service, rushing shots to New York in time to be shown at Broadway houses when they opened on Sunday.

All of the newsreels secured plenty of film at all the functions. Useful supplies of library material on leading political figures were obtained. Each of the five reels released either two or three stories on each convention, most of them being specialed and shipped air-express to all accounts. Probably 100,000 feet of negative was shot at each convention and some two million feet of positive prints released.

When the costs are all in, it is likely the newsreels' political coverage to date this year has run close to the budget of a Hollywood feature. That the expense is justified by the public's interest has been proved by the many congratulatory letters and telegrams received from theater clients by all companies.

And the campaign has just started!





## India Producer Visits Hollywood

● Y. A. Fazalbhoy, one of the most prominent figures in India's growing motion picture industry, was a recent Hollywood visitor. Mr. Fazalbhoy is one of the proprietors of the Bombay Radio Company, distributing such familiar motion picture products as Mole-Richardson lamps, Bell & Howell and Mitchell cameras, etc. In addition, he is with his three brothers, an owner of Sound City Studios, the largest and most modern rental studio in India.

## British Want Patent

● Negotiations were entered into by a representative of British interests with Armind Fried for the purchase of the English rights to his patent for the focusing of cameras.

It seems that this particular patent would be of great assistance in color cameras with their prisms which do not permit the camera operator to get a clear view of the image he is going to shoot.

The Fried patent takes advantage of an entirely new system, according to the inventor and is claimed to be the only practical system available for use in color cameras.

At your Service!

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and-

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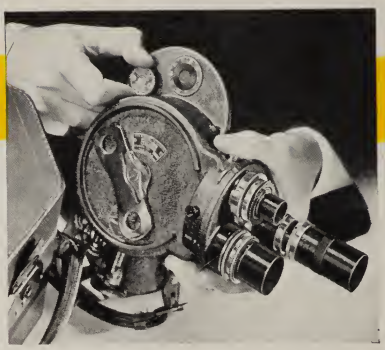

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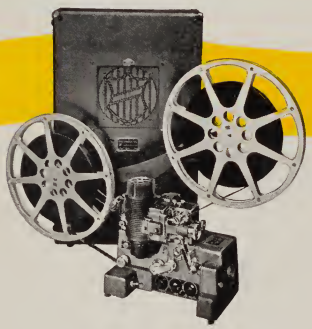
Other Filmo 16 mm. cameras include the 70-E at $133, the slim 75 at $59.50, and the light, compact, magazine loading 121 complete with F 1.5 fully color corrected T-H Cooke lens, at $117.50; with F 2.7 lens, only $72.50.



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How Short is a "Short"?
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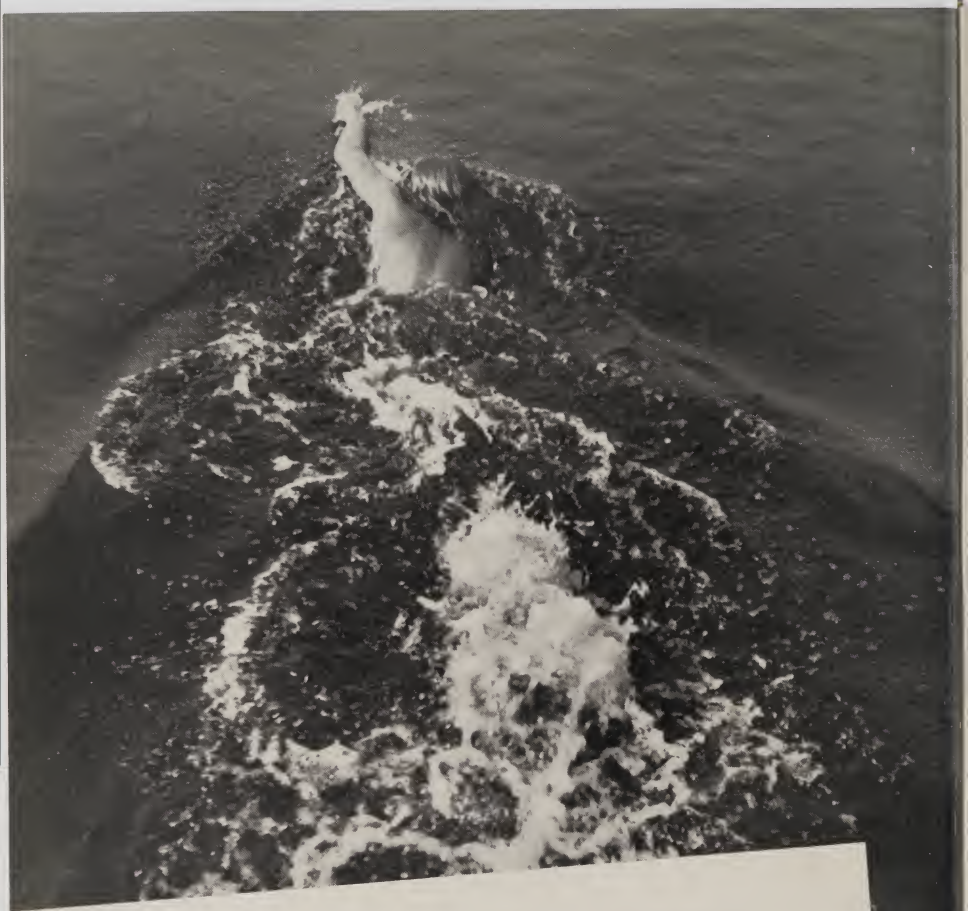
AUGUST
1936



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# AMATEUR MOVIE SECTION

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## Contents . . .



## Next Month . . .

• We will again take you into one or two of the studios and let the professional craftsmen tell you how you can apply their methods to amateur movie making. These tips will be very timely, as you are ready to cut and edit your vacation films and you will find much in their advice that will be helpful.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

# Making the Clouds Roll By

by
**James A. Sherlock**

MOST personal filmers have at some time or another a few feet of unexposed film left in their camera that is just itching to be exposed. Here is an interesting way to use this footage and one that will leave an appeal for at least another hundred feet of this subject that can be filmed any place where there is a blue sky and cumulus clouds.

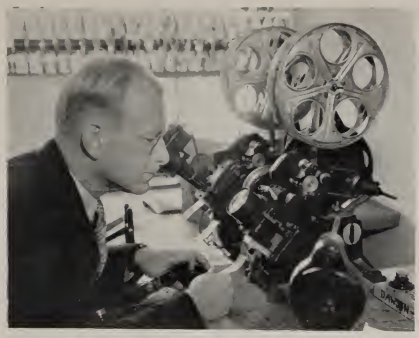
The thrill of first seeing the speed of cumulus clouds increased cinematically more than repaid this amateur for his trouble. The subject can be filmed by every serious amateur and this particular brand of clouds mentioned can be found at all times of the year, after stormy weather.

If your camera is made with a single frame exposure device, half your troubles are over; mine was not, so I set the speed control at eight frames a second (ordinary speed will do if the camera has only one speed). I next removed the lens, gave the starting button one sharp touch and noticed that the shutter opened only once, after I could control the weight of my touch. This meant that only one frame would be exposed each time I gave one sharp touch. Next I mounted the camera on my tripod, a good strong rigid one with its feet firmly planted in the ground to prevent movement; this is very necessary with single frame exposures.

Heavy filters that will absorb some of the blue light were tested and the 23A (red) or G (orange) were found most suitable. I used the latter. These have a factor of three with ordinary panchromatic film and this exactly compensates for the extra light that reaches the film when single frame pictures are taken as the shutter does not travel as fast when only opened one at a time. The camera is ready now, the filter chosen, next the exposure meter must be brought into use. If a big bank of clouds is coming, measure the light from the bottom of these, exclude as much blue sky as possible. If the cloud is a samll one with a lot of blue sky surrounding it, close the aperture one stop on your meter reading. If you use either of the filters, recommend now you set your aperture without allowing any compensation for your filter. Turn your view finder to a spot in the blue sky that your cloud is approaching, preferably a cloud that is high in the heavens, as the orange filter will make a blue sky darker if the filter has no haze to penetrate. Figures 1, 2 and 3 were taken on panchromatic film with a G filter within five

Continued on page 357

**All above were shot on Panchromatic film with a G Filter. Notice how dark the sky is in Fig. 3 as compared to two previous shots. Notice on lower picture how reflected water lightens whole picture.**



Ralph Dawson editing a production at Warner Bros.' Studio.

# How Anthony Adverse Was Cut

by
**Ralph Dawson**
Film Editor, Warner Bros. Studios.

YOU MAY RECALL that "Anthony Adverse" in book form covered upwards of twelve hundred type pages. In more ways than one, it was a "big story."

When you see it on the screen, as of course you must, I believe you will agree that the Warner Bros.' version, which is now being premiered in the larger centers, is a "big film" (I almost used "colossal") in many respects, including its longitude. From start to finish it measures exactly 12,250 feet.

To grasp fully the magnitude of the undertaking, a few figures are pertinent. The script was of 250 pages; 1,098 camera set-ups were utilized, which I believe, is a record number of scenes in any dramatic offering to date. In addition, another 200 scenes came from the special effects department in the form of superimposed titles and similar process photographics.

These 1,300 individual scenes representing a total of upwards of 600,000 feet of positive print came in to my cutting room. From this mileage of celluloid tape I was to fashion a unit of screen entertainment telling a fast-moving and straightforward dramatic narrative.

Translating the job into amateur camera measurement equivalents, it is as though you had 240,000 feet of 16mm film or 120,000 feet of 8mm to edit and patch together. It represents quite a stack af 50 or 100-foot spools.

I was well prepared for this avalanche af film, far I had just finished the cutting of "Midsummer Night's Dream," which in many regards was the most intricate editing assignment I know of.

First sifting came in the projectian room. With Mervyn LeRoy, the directar, I viewed each day's rushes on the screen. From these the choice takes were selected. It must be remembered that any scene may be shot several times fram varying angles and with slightly varying action in order to obtain the best possible rendition of that segment of the story.

The unused ar "secand" takes were stored in cans each correctly labeled for instant access if later needed.

When sufficient af these "first" takes accumulated to comprise a sequence, I asembled them. The entire series of these sequences completed the picture.

Each of these scenes, of course, is stripped of all but the essential action before going into the sequence. When we screened this first "rough cut," the picture ran 15,000 feet. This footage was the cream of the 600,000 feet passing before our first examination.

Then came the delicate surgery of trimming the picture without interfering with the smooth flow of continuity. A few feet would be trimmed here; possibly a few feet would have to be added in another place. This refining and final polishing is arduous work; 2,500 feet had to be taken from a picture that apparently couldn't spare a single frame. It's a rather ruthless and cold-blooded operation. But, weighing the relative value of every foot of film, we eventually pared the picture to 12,500 feet of which some 300 feet is taken by straight titles.

These positive trims are rolled and labeled with the scene numbers and stored in tins.

Sound track film carrying the dialogue is cut to conform to the picture print. With this working print approved, I can sit back and draw a deep breath of relief and await the first appearance of the next production—which usualy comes the next day.

Picture and sound track next visit the sound-effects and music departments where these contributions are added to the dialogue. To this working print, now complete as to sound and picture, the negative is matched and cut. Picture and sound on their two separate negatives are then printed on one positive which is the release print exhibited in your theater.

It has been stated many times that pictures are shot on the set, but are really made in the cutting room. To a large extent this is true. The amateur cinematographer constitutes all these several agencies; he is director, cinematographer and editor rolled into one.

He is in position to cut with his camera as he is shooting. His work does not suffer the caustic competitive criticism that ours does. He hasn't the investment in sets and players. It is not essential that he shoot each scene several times to assure himself he is getting the finest effects obtainable. Nor that he make countless production "protection" shots.

I offer these suggestions. Lay out your proposed picture on paper, scene by scene and in detail. Visualize the pictarial form each scene should take. Then shoot the scenes. When your film comes back from the laboratory, assemble and patch it together in continuity—but make it a rough cut.

Naw screen this first draft. Run it several times until you get the feel of its story and can sense the needed tempo of its proper development. Then do your trimming. You can now value each scene in its relationship to the entire picture.

If you make final trim of each scene as a complete unit rather than as a contributing factor to the entire picture, you will miss much of the smooth pace and timing that is

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Photo by Ned Van Buren, A.S.C.

# Here's Practice in Indirect Representation

by
**Barry Staley**

WHY NOT film an interpretative treatment of a current topical subject? Indirect representation is an effective way, frequently used in professional film production, of portraying influences or moods, which are intangible of themselves and hence can not be placed on film directly. Their presence is felt and their visible effects on others can be caught by photography and hence conveyed to the screen by inference. Unseen menaces can vividly be shown by this treatment and made as real to audiences as though actually visible.

Let us take the current period of unusual burning weather that has brought death and drought conditions to wide sections of the nation. High sun temperatures are not directly photographable in abstract. But by making excessive heat the villain of our story and showing its influences on familiar environments, the point can be scored in telling italics.

This scenario will guide you. It calls for short, fast cuts: brief scenes giving impressionistic Montage effects. Be patient and get just the kind of character types needed to make the film replete with human-interest.

MAIN TITLE: HEAT WAVE.

SCENE 1. LONG SHOT from elevation, shooting down on a length of city street, glaring hot and steaming under the sun. Shadows are black and light areas shimmering.

SCENE 2: LONG SHOT. The same scene shot from street level. Hot lights are pouring from pavement; pedestrians are sweltering.

SCENE 3: MEDIUM SHOT. Several passers-by. Men carrying their coats, shirts open at throat, mopping their perspiring faces.

SCENE 4: CLOSE-UP. A thermometer with mercury registering over 100.

INSERT: Front page of newspaper with headline, MERCURY SOARS TO 107.

INSERT: Newspaper headline, SCORCHING HEAT PARCHES COUNTRY. It runs diagonally across screen.

SCENE 5: MEDIUM SHOT. The queue of ice-buyers at the ice company's plant.

SCENE 6: MEDIUM SHOT. In the poorer sections of town. Urchins peeled down to minimum clothing begging small pieces of ice from ice wagon in street.

SCENE 7. CLOSE-UP of two of the urchins eating the treasured ice in the street.

SCENES 8 TO 15: CLOSE SHOTS of colorful characters and scenes reflecting suffering from heat among the poorer classes; mothers with palm fans, fire-escapes made into open-air bedrooms, the itinerant penny ice-cream huckster, the strawhatted dray-horse drinking from water trough.

SCENES 16 TO 20: CLOSE SHOTS in a public park. Interesting types sprawled on park benches, on the grass, fanning themselves with old newspapers, in various stages of undressed comfort.

SCENE 21: CLOSE-UP. At an open lunch-stand, a sweaty workman is downing a foaming stein of beer with cooling effect.

SCENE 22: CLOSE-UP. A small boy or girl nibbling at a soothing ice cream cone.

SCENE 23: MEDIUM SHOT. Exterior of movie theater. Sign reading 20 DEGREES COOLER INSIDE. Hot and sticky customers are entering.

SCENE 24: LONG SHOT. On the outskirts of town. A field burned brown and lifeless by the sun.

SCENE 25: CLOSE-UP. Your dog panting, tongue well out.

SCENE 26: MEDIUM SHOT. In your back yard. Children are in bathing suits, enjoying cooling sprinkles from the garden hose.

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# Shooting 16mm at the South Pole

An Interview with
**Commander George O. Noville**
Executive Officer, Byrd Antarctic Expedition, Byrd Arctic Expedition, etc.

MY TWO 16mm CAMERAS spent two years in the Antarctic, and did a man-sized job for me. Working at "the home of the blizzard," often in temperatures as low as 70 degrees below zero, my two Filmos exposed 42,000 feet of film with an almost perfect record of success: for where the "official" 35mm. cameras had plenty of troubles and mishaps, my Filmas scarcely lost a frame out of eight miles of films.

But in talking about substandard filming in the Antarctic, I am only a voice speaking for the many substandard filmers in the Expedition. We had fifty men on the Second Byrd Antarctic Expedition and of those fifty, nearly a dozen packed 16mm, or 8mm. cameras. Our substandard group included scientists, fliers and cooks' helpers, and the films we made ran the gamut from strictly scientific records to the homiest of Antarctic "home movies." My own pictures I tried to make a broadly human record of everything the expedition did, so perhaps it may serve as a liberal cross-section of what Little America's 8-and-16 brigade did.

The first expedition to Little America, and the North Pole flight before that, had taught me how to prepare camera equipment for successful work in the Antarctic. Before we started, I had the cameras completely disassembled, and carefully removing all the oil, and tightening up all of the lesser bearings to compensate both for the removal of the oil and the contraction of the metal in the Polar cold. The more important bearings, which could not be asked to operate without lubrication, were packed with powdered graphite. This is vitaly important, for the extreme cold will freeze ordinary oils, with disastrous results to the camera.

The same thing is true of moisture. I literally baked every bit of moisture out of the cameras in an oven. Then I kept both cameras and film in one of our ice-block sheds where the temperature was always the same as that outdoors. Thus there can be no trace of moist air in the cameras, to freeze them up or to condense into an ice-cap over the lenses. On the few occasions when I took the cameras inside, to film interior scenes of the expedition's home life, I warmed them slowly, and, when I was through, baked them in the oven before returning them to their ice-house.

The matter of exposure is a difficult problem in the Polar regions. The light is very deceptive; between the white snow and the usually foggy weather, one would expect the light to be of much higher photographic value than it really is. In general, we exposed Superpan film as though it were ordinary Pan, and found ourselves about right. Exposure-meters, incidentally, proved misleading under the abnormal conditions there at the Pole; most of our photographers, from the official Paramount News and Associated Press professionals down to the ever-present 8mm. brigade, carried meters, but soon found them unable to cope with the unusual light. In practice, I found the safest guide to exposure was to make careful photographic tests. Before shooting any important scene, I would put a fresh roll into the camera (negative film was used exclusively). Then I'd make a five-foot test, using several different exposure-settings. Snipping this test-strip off in a darkroom or changing-bag, I could develop it, and have an absolutely accurate guide to exposure before I finished the roll.

You ask what I photographed down there in the snow? Everything and anything! The "official" cameras had definite instructions as to scenes they had to bring back, and only a relatively limited supply of film, so they stuck pretty closely to orders. My Filmos, on the other hand, worked under no orders but to bring back interesting pictures. They stuck their inquisitive lenses into everything that happened. And because they were small and handy, they could "cover" things the bigger professionals couldn't get near. Packing a professional camera on the trail with a dog-team or tractor party is something which must be taken rather seriously. Setting up a tripod, focusing, and so on, take time. The little 16mms., on the other hand, can be tucked away in your sled, jerked out, sighted, the trigger pressed, and the camera put away again in less time than it takes to tell it. I appreciate the steadiness of a tripod as much as anyone else does—but in a case like this, when the few moments involved in setting up the tripod might lose an important scene, I'm all for the little cameras that don't demand tripods.

So from the moment we reached the ice to the time, two years later, when we scrambled back aboard ship, I kept both cameras busy getting candid camera movies of everything we did. When my duties made it impossible for me to use the cameras, I'd give them to other members of the party and let them make whatever pictures they chose. In addition to scenes of definite news or scientific value, I tried to picture things that the average man, turned loose in Little America, would naturally stop to look at.

One such subject, for instance, is the way the sled dogs lived. No matter what the weather, the dogs stayed outside. Scenes showing how they were fed have interested all types of audience. The scene begins as a long-shot which shows an apparently empty landscape, dotted with little mounds of snow. As the trainer appears with the dog-food, the mounds stir, and unexpectedly reveal themselves as dogs, curled up for the night and completely covered by the drifting snow.

Another unusual scene is one made in one of the milder blizzards. It is one thing to read of storms so fierce that a person can get lost within twenty feet of the camp. It is quite a different thing to see it on the screen. Everything in the picture is gray-white, with the icy "ground" barely distinguishable from the swirling, gale-driven snow. A man walking away from the camera disappears entirely before he has taken half-a-dozen steps.

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# The Camera Goes to See

by

**Clark Foster**

LAST CALL for summer scenes! According to galloping pages on the calendar, the warm-weather vacation days are getting limited in most sections. So it behooves us all to take stock of our outdoor footage and make out a requisition list of the shots needed to make our quota of summer pictures complete. Missing scenes which are sorely needed to acquire smooth continuity will be out of reach within a few weeks.

Or perhaps you are not one of the energetic vacationers with strenuous itinerary who cram many fevered miles within a set boundary of time and so are not presented with a continuous parade of colorful and intriguing scenes for your camera.

Possibly you are of fiber sufficiently strong to resist the lure of travel folders and cling to the original concept that a vacation should be an interval of luxurious leisure and rest. So you hie yourself to a favored retreat and practically hibernate for awhile.

Here, you may say, are few cinematographic opportunities. But wait. Let us go over the familiar ground again, this time with new eyes adjusted to cinematic pictorial composition.

Many a time I have heard this protest from empty-handed cine lensers, "I've walked for miles in the country without seeing a shot. I could have taken a lot of attractive still photographs possibly, but there was practically nothing to film." This with a stiff breeze rustling the branches and streams and banks of clouds scudding across the sky!

The countryside, on farm, in mountains, at the shore—can provide superb material which offers endless possibilities for taking films of great artistic beauty.

As usual, everything depends on how you go about it. As you go rambling with your camera, make these strolls and hikes deliberate quests for filmable scenes.

With this new attitude toward the environment of your favorite retreat, it will take on a new and greater appeal. You will find vistas and nooks and shaded dells you never before fully evaluated.

There will be but a modicum of visual action to your picture and certainly no plot. The film will be essentially of the documentary category. But it will possess and preserve the endearing characteristics of the locale for the satisfaction of your own memory in time to come. Not an inconsequential item in this changing world.

As you plan your film, ponder these questions. Why does that favorite district appeal to you? What attracts you? Wherein lies its charm and its inviting appeal? For what attracts you will doubtless interest others who sit before your screen.

Is it the many streams or lakes that shimmer and trickle in the summer sunlight, is it the quaint sleeping villages or their rustic inhabitants, is it the calm depths of the woodlands, or the imposing heights of majestic mountains?

Is it the wide expanse of drowsy veranda, the delicious quietude of the setting, the magnet of heaping platters of home-cooked country victuals?

Whatever these main characteristics, they are the provender for your picture. Commonplace? Certainly. And therein lies the deep-rooted human interest of your subject—and the challenge to your camera talents.

Fortunately you are in no hurried schedule. You have time—and the patience, I hope—to evolve treatments that will lift these commonplaces to high cinematic charm.

It pays to exercise care and thought in selecting the most effective point of camera vantage. You can afford to observe the settings at various times during the day to capture the fullest values of light and shadow.

In woodlands, flickering lights form engaging kaleidoscopic patterns. On streams and pools and lakes, changing light values and directions provide infinite variety of photographic studies.

Sunrises, if you awaken that early, and dawn offer uncommon soft and delicate touches. Sunsets present gorgeous arrays of light and color when banked against cloud formations.

Winding lanes, the old farm houses and outbuildings, the aged fences or stone walls, a forgotten mill, trees that are tall and gnarled or round and plump—all may be so familiar to your eyes their intrinsic beauty is lost, but your camera will capture their earthy enchantments.

At the shore, you pass by the current crop of bathing belles for art studies of the weathered fishing smacks and their equally weathered crews, the sea-going seines and fishing tackle, the wharves and tottering ancient piers on moss-covered pilings, the crash of surf against jutting rocks,

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# Just How Short Is a "Short"?

by
**Bert Gilroy**
Associate Producer, RKO Studios

BEING a confirmed 16 mm. devotee during after-office hours, I can draw a number of analogous lines of structural composition between the so-termed short-subject of the cinema halls and the product of the amateur cine-lenser who goes in for the production of domestic dramas and other story-forms of household picture making.

Close observation of short-subject films which are an important part of every theater program should be illuminating to every amateur who prefers to have his celluloid creations approximate the professional rating of entertainment content.

The screen "short" is commonly a one-reel or two-reel item. It is entertainment in capsule form. It is highly concentrated screen fare. Unlike feature productions, costs of making are definitely limited; there is a top figure beyond which the average cost must not go if it is to show a profit. Budgets are rigid in every phase of production.

This economy is not unlike the amateur's desire to keep his filming within reasonable boundaries and to get as much on the screen as he can without spending a lot of money.

Some shorts are very short indeed, others stretch out in screen time. A one-reel subject will range from six minutes to eleven minutes as screened. A two-reeler will run from seventeen to twenty-one minutes. This at sound speed of ninety feet a minute, or twenty-four frames a second. The ideal length for a one-reel is seven hundred and twenty feet, or eight minutes screen time.

This corresponds to two hundred and ninety feet in 16mm and one hundred and forty-five feet in 8mm.

Fifty feet is given to the main title and twelve to fifteen feet to the end title, which should be deducted from the total length figures to give the net picture footage.

The one-reel of average length will have from forty to fifty different camera set-ups; in other words, that many scenes. It will have fifty to seventy-five cuts, as close-ups are inter-cut with longer shots. These same figures can well apply to the average amateur production.

The most important factor in a short is the basic idea or story. Requirements are rigid. The story must be simple, easily understood, not complicated as to plot and progressing in a straight line. There is no time, as in features, to develop character. A player's character must be established on his first screen appearance and he must remain in that character throughout.

The picture must jump away to a fast start, as a sprinter coming off his starting mark. Likewise, it must come to a rapid close once the story is told. A good rule to follow is to launch the story with a flying start, tell it in proper speed increasing to the climax, and then get it off the screen just as fast as you can without too noticeable abruptness.

Experience has taught us the sure way of making shorts. You can make your reels in the very same proved procedure.

First we evolve the basic idea or theme of the story. Then we put it on paper in synopsis form. If it still seems good, we make a more detailed synopsis filling in all the salient particulars. This is polished and divested of any trends to stray away from the central line of the tale.

Now we write the script or scenario, breaking the story into the forty to fifty scenes needed to pictorialize it. This is where we get our basic continuity. The story as a whole is cut into scenes; it is not a matter of trying to fashion a story out of scenes.

The next step is to consider this scenario for length. First drafts invariably run too long and must be condensed. This is determined by actual trial. Two or three of us walk through the scenes, simulating the specified action in correct timing, and a stop-watch clicks the elapsed time. Just like you, we have a given amount of negative and have to make every foot of it count.

We try to work in short scenes. Speaking in 35mm measurements which you can readily reduce to your 16mm. or 8 mm. needs, a ten-foot scene is relatively short, although to gain the effect of speed in comedies we will use six-foot or even three-foot cuts. A fifty-foot scene is just about the limit for any one set-up angle.

Now as to the nature of the subject matter. Cartoon films are the most popular of the shorts, as witness Mons. Mickey Mouse. But these are beyond the production ken of most of us amateurs. Next in popular esteem come comedies, particularly what we call situation comedies. Here the premise or locale is quickly established and the central character or characters put in situations which of themselves are amusing. It is rather a comedy of action than of acting. This type of film is well within the reach of every cine-amateur.

Continued on page 359

# WHEELS OF INDUSTRY

### Eastmon Bantam Special

● With the announcement of the Kodak Special the Eastman Kodak Company adds to its line of cameras designed for the advanced enthusiast.

The Bantam Special has a die-cast and machined aluminum case, finished in a new-type baked enamel. When closed, the case provides pratection for the lens, shutter, and front elements of the view-finder and the range-finder.

The range-finder is built-in, and of the split-field, military type. The housing in which it is located is an integral part of the camera body casting and is completely enclosed. Coupled and synchronized with the focusing mount, the range is found by moving the focuslever which operates from a position directly above the shutter. When the split image is brought into a coincidence, the lens is in focus. To the right of the range finder is a built-in optical view finder. An auxiliary focusing scale on the lens mount shows at what distance the picture is being taken.

In addition to the shutter release a special plunger release or cable release, may be used.

Panatomic and Super X film are available for this camera.

Kodak Bantam Special is 4⅞" long, 3⅛" wide and 1 13/16" thick; it weighs 16 ounces.

### New Ektar Lens

● Eastman announces the appearance of the first of the Ektar lenses—a new series of Kodak Anastigmats.

The 45mm f.2 Ektar lens is a six element anastigmat. Made according to a newly computed Eastman farmula, it is claimed the Eastman lens designers, in this new Ektar, have succeeded in reducing both the spherical and chromatic aberration to neglible proportions, at the same time maintaining a perfectly flat field, free from astigmatism and distortion to a degree which is remarkable in a lens of this very large aperture.

### Two Films Available

The Kodak Bantam Special loads with eight exposure roll film. Two different types of film are available—Panatomic, F828: Super X, X828.

Note that Super X Film X828, is now available for Bantam Special owners. Extremely sensitive to yellow, green and red, it makes possible good negatives much earlier and later in the day, and is ideal when very high shutter speeds are necessary to catch rapid action. Used indoors, Super X goes a step farther than Kodak "SS" Pan, and with all its added speed, does not show an increased grain size. The development instructions, packed into each roll should be followed exactly.

### Calar Photography

● The American Photographic Publishing Company have just released a book on color that should prove very popular. It is titled, "Natural Color Processes," and is authored by Carlton E. Dunn. The descriptive line says it is "a cancise outline of the available methods with practical instructions." The book sells for $2.00.

A listing of the chapter headings will give a comprehensive idea of the contents of the book. They are: "Simple Color Analysis," "Making Color Separatian Negatives," "Autotype Trichrome Carbro," "Belcolor Printing Film," "The Chromatone Process," "Reliefs and Imbibition for Color Prints and Transparencies," "Duxochrome and Colorstil Color Printing Films," "Dye Mordanting," "Screen Color Transparencies," "Dufaycolor," "The Finlay Process," "Mation Pictures in Color."

### Perspective Baak

● A book published by Caliborn Products, Inc., of West Orange, N. J., has reached us. While it has the broad title of Caliborn Note Book, its subject is "Perspective and Optical Illusians of Depth." Its three main divisions are "Illusions of Depth," "Perspective Methods" and "Perspective Problems."

This is a book which will undoubtedly prove of great benefit to artists, art directors and to photagraphers in that it gives them the fundamental rules governing perspective, which is so important in photography.

### Film Speeds

● It is worth while picking up the new Weston Film Speeds sheet at your dealer if you use a Weston meter. The latest sheet is dated June, 1936. Considerable space is given to Kodachroma film. It rates this film at 4 for daylight (with or without filter) and 1.5 far photoflood with filter. It gives 8mm the same rating. Special note is made about Kodachrome A and gives it a rating for tungsten or photoflood the same as regular Kodachrome for daylight. In other words, it rates it 4 for interior lighting.

It rates for still film as well as movie film and also gives rating for positive film when used in the camera.

### B & H Catalag

● A catalog on accessories for 16mm and 8mm Filmo motian picture cameras and projectors has just been issued by Bell & Howell Company for free distribution.

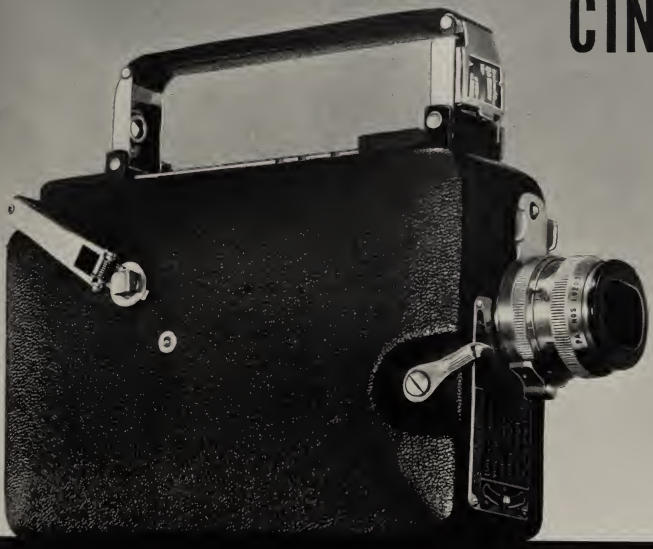
Many new accessories are revealed in this booklet; new exposure meters, new lighting equipment, auxiliary camera equipment for advanced cinematography, an entire new line of film editing equipment based upon an entirely new film splicer; and many others.

As indicated by the table of contents, the book is arranged in sections, each devoted to a related group of units. Fully 500 separate accessory items are listed. Everything from a camera aperture brush to portable gasoline-engine-driven generators for operating Filmo projectors and Filmosounds, is given due place and description.

Copies of the catalog may be had without charge by request to Bell & Howell Company.

*Loads in 3 Seconds*

# MAGAZINE CINÉ-KODAK



## NEW... but already the Leader in the 16 mm. Field

3-SECOND LOADING—you can do it with your eyes shut. No threading—the film comes in a magazine. Slip the magazine into the camera and close the cover—you're set to shoot. You can switch from one film to another in a jiffy. No wasted seconds. No wasted footage. The magazine protects the film. Footage meter on each magazine—whether it is in the camera or in pocket or carrying case—shows how much film there's left.

THREE SPEEDS—normal, half-speed, and slow motion. At normal exposure speed Magazine Ciné-Kodak purrs along at 16 frames per second. When you want to attain an amusing double-time screen effect or overcome unusually adverse lighting conditions, you merely shift a lever at the front of the camera to half speed. Setting this same lever at the 64 frames per second marking brings you beautiful slow motion studies. Under your finger, as you shoot, a gentle "pulse" button keeps you posted on scene length while your eye remains at the finder.

FIVE LENSES add to the versatility of this outstanding camera. Its standard lens is a Kodak Anastigmat *f*.1.9. By means of an inexpensive adapter this *f*.1.9 lens is interchangeable under finger-tip control with four accessory lenses: 2-inch *f*.3.5, 3-, 4½-, and 6-inch telephotos. The full-vision, eye-level finder system competently serves them all.

SMARTLY STYLED—Magazine Ciné-Kodak's light, yet sturdy, die cast aluminum case is finished with pin-grained genuine leather and satin-finish chromium. To those who want home movies at their best and simplest—here is your camera. $125, with *f*.1.9 lens; $137.50 including de luxe carrying case for camera and accessories.

● *Loads with regular Kodachrome, Kodachrome Type A, Ciné-Kodak "Pan," and Super Sensitive "Pan" Film.*


EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

# Amateur Filmers Throng to Junior Society

WHEN the American Society of Cinematographers organized the junior branch, it was the opinion that in the course of several years a membership of substantial numbers would be enrolled. However, the first few months has already brought more members than the organizing board had set down as the quota for the first two years.

This charter membership is not confined to this country, but has already spread over every civilized country in the world. Amateurs as well as semi-professionals are seeking admittance to the Society of Amateur Cinematographers as they feel membership in it represents real cinematic achievement.

As laid down in the rules, applicants must submit a picture made by themselves. This picture most be complete and fully titled. Qualifications for membership are judged more from this picture than from the requirements set forth in the application form.

The most frequent question from amateurs is whether they are barred from this Society if they have made commercial or other pictures for pay. It is the purpose of the Junior branch to accept for membership all worthy cinefilmers, whether purely amateur or semi-professionals, who have not the qualifications to become members of the American Society of Cinematographers.

It is obvious that the out-and-out amateur will gain considerable from his semi-professional fellow members. These men will have some experience that borders on the professional about which they can tell them and from which experience they should gain a great deal of good as these semi-professionals are using the same type of equipment as the amateur.

As occasion arises and members of the Amateur Society have in mind a certain type of picture or a certain effect they wish to secure in a picture, they write us to determine whether we have a picture on hand that has used this particular effect. If we have we are pleased to loan this picture to the member for him to study. This will permit him to observe at first hand just what certain filters or other effects will do under certain circumstances. It is these things that lead to better photography.

Even back in school days we soon learned that the things which we attempted after we had learned the theory, remained in our memory longer than the things we learned merely by rote.

This is true of photography. After you have read of a certain thing and possibly seen it in a picture, it then becomes necessary for you to do that thing in order to really know how to do it. Constant practice in a thing will make you proficient.

We know of a beginner who had difficulty in determining the right exposure, and that is always the stumbling block for a beginner. He finally learned from a professional that there was such a thing as a "normal" for every film. Here was a starting point. The great mystery of how the professional determined the proper exposure was wiped out. It was really a practical thing. When he learned that the normal for the film he was using at the speed of his shutter was f.11. he spent much of his time merely looking at a scene as he went to and from work or as he rode around and tried to determine from his own judgment just what the f. value of that scene would be interpreted into the terms of his motion picture camera.

He did not really have to make a picture in order to become proficient in the knack of determining the proper exposure. He learned in that way what a normal scene was. He learned what open shadows were and all of the other standard scenes by which exposure is gauged.

Another thing he did for himself without wasting a lot of film in learning, was the locating of good photographic subjects. He used his camera for this and merely looked through the finder. That he was not taking pictures was not evident to anyone. However, he did not shoot everything at which he aimed his camera, but he did walk around a scene until he felt he had the right balance and one that was the very best composition. At times when he came across a picture that he felt was irresistible, he exposed his film on it. In this way he developed the "feel" for composition. And after all that is what you cultivate when you obey all of the rules of photography.

You develop the "feel" for photography the same as a musician develops the feel of the mood of any certain piece of music. If they play it mechanically they are equivalent to our snap-shooters who expose film regardless of subject matter.

We have rambled off a bit in order to demonstrate the advantages of being associated with professionals and those who know just what make good pictures and good photography. It is evident that those eager to advance will receive better information and more authentic knowledge from those whose business it is to make motion pictures; from those whose salary for making these pictures some times runs as high as that the President of the United States. These men in the studios are the acknowledged photographic masters of the world. They are giving to the world the finest examples of photography done under very trying conditons at times. They are able to do good work because they have the proper foundation, they have the finest training and are constantly attempting to improve their art. They have brought photography to a real art in a commercial atmosphere. These men are not like artists who have all day to study a subject, or who can go for weeks waiting for an inspiration. They must interpret the mood immediately and they must maintain this mood in their handling of the photography of the picture on which they are working.

It can be seen from this that those amateurs who are at all eager to make real advancement in their hobby could not turn to a more reliable authority than the American Society of Cinematographers.

The service to the members does not only include the matter of photography itself, but also the other phases of motion picture making as the amateur can use it. Continuity is an important part of cinematography. However, the Society does not encourage a man to say, "I want to make a picture of the sea. What sort of continuity shall I build around it?" This man should have some idea of what the theme of that picture should be. The sea would be a documentary. It has many moods, just which

Continued on page 358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# A JUNIOR

## *for the* Amateur

THE AMERICAN SOCIETY OF CINEMATOGRAPHERS has organized a junior branch of its association for the amateur to be known as the SOCIETY OF AMATEUR CINEMATOGRAPHERS.

FOR MANY YEARS amateurs have been requesting the American Society of Cinematographers to form an organization for them that would be representative, authoritative and instructive.

WHILE IT WOULD be easy to form such an organization in the spirit of enthusiasm that usually accompanies such pleas, but to insure the continuance of such an association it needs real ideals and a constructive policy.

THE SOCIETY OF Amateur Cinematographers is not a society to give to the amateur letters to be used after his name and it does not throw its membership open to everyone who has the fee to join. The Society of Amateur Cinematographers is based on strict and sensible requirements.

FIRST, THE APPLICANT must own a camera; second, he must have made motion pictures, and third, he must submit a picture to the reviewing board which is made up of members of the American Society of Cinematographers. This does not mean that the amateur is going to be judged by 100% professional standards as practically every member on the reviewing board operates either an 8mm or 16mm camera and is familiar with the shortcomings of the amateur's equipment.

WHEN AN AMATEUR has been admitted to the SOCIETY OF AMATEUR CINEMATOGRAPHERS, it is a sign of achievement; it is an indication that he is truly an amateur cinematographer, and he knows

# SOCIETY

that his fellow members are active and accomplished amateurs. Also he is being guided by experts, by the acknowledged camera masters of the world, by Hollywood's greatest directors of photography.

MEMBERSHIP will include a subscription to the "American Cinematographer". It will also include the use of the outstanding films made by members of the Society of Amateur Cinematographers. As films are submitted, the best will be duplicated and an analysis prepared by a member of the American Society of Cinematographers. This analysis will go with the picture and the picture will be available to any member of the Society of Amateur Cinematographers.

FOR THE MOST outstanding members and the most able amateur cinematographers, a fellowship will be created, giving that amateur the title of Fellow of the Society of Amateur Cinematographers. Requirements for Fellowship will be announced later.

MEMBERSHIP IN THE SOCIETY of Amateur Cinematographers gives each member access to the film library, privilege of asking questions, and advice on all branches of movie making.

AS THE SOCIETY GROWS, it is the plan to create branches in other centers to be made up of members in those cities. In Hollywood a branch will be created and the programs originated here will go forward to other branches as a unit.

WRITE FOR APPLICATION BLANK AND FULL PARTICULARS.

**American Society of Cinematographers**

**6331 Hollywood Boulevard** **Hollywood, California**

## Here's Practice in Indirect Representation

Continued from page 346

SCENE 27: CLOSE-UPS of the children. Water streaming over their heads and faces.

SCENE 28: LONG SHOT. A wheat field or corn field ravished by heat.

SCENE 29: LONG SHOT. A dried-up, waterless brook or stream.

SCENE 30: MEDIUM SHOT. Cattle standing despondently in sheltering shade of tree or beside dry creek.

SCENE 31: LONG SHOT. Automobiles speeding to beach, with occupants dressed for bathing.

SCENE 32: LONG SHOT. Surface cars arriving at beach and disgorging passengers seeking relief.

SCENE 33: LONG SHOT. Along sidewalks and streets are walking men, women and children headed for the beach, in suitable attire. Cut in a CLOSE-UP of two or three good types.

SCENE 34: LONG SHOT from elevation of the expanse of sandy beach; the beach umbrellas, densely populated sand, the breaking waves.

SCENE 35: MEDIUM SHOTS of typical beach activities.

SCENE 36: CLOSE-UPS of beach characters. Search for the pictorial types and shoot from a low camera angle. The shapely, long-legged girls; the hippy alder women; the paunchy fellow in trunks and ever-present straw hat; the bronzed, square-shouldered young beach idols; the chubby children; the life guard.

SCENE 37: MEDIUM and CLOSE SHOTS at the water's edge. Children wading, the timid girls, the brash young athlete who goes plunging in.

SCENE 38: MEDIUM and CLOSE SHOTS. Bathers in the water. (There should be no land showing.) General bathing activities in the refreshing cool water; riding the breakers; the strong swimmer; the girl being taught to swim; diving from the float; the life-boat paddling about.

SCENE 39: CLOSE-SHOTS on the beach following a dip in the surf. The dog shaking himself dry, the toweling of assorted figures.

SCENE 40: CLOSE-SHOTS at the concession stand. Bathers are dawning bottles of cooling drinks, munching at ice cream, at sandwiches.

SCENE 41: LONG SHOT. (Stop down to f 1.6. Use your red filter.) The sun disappearing behind the horizon.

SCENE 42: MEDIUM SHOTS. Bathers silhoutted against the darkening sky.

SCENE 43: MEDIUM SHOTS. (Evening.) On beach and in public parks, individuals are preparing to sleep the night out in the open.

INSERT: Newspaper headlines (flashes): SCORES DIE FROM HEAT. AID RUSHED TO DROUGHT AREA. NO RELIEF IN SIGHT; HEAT WAVE CONTINUES.

SCENE 44: CLOSE-UP. Another thermometer. It is registering above 100. FADE OUT.

If you do not live near the seashore, use your nearby lake, river or local swimming pools for the water scenes. Scan the crowds carefully for unusual human types, styles of dress and typically expressive situations. In your selections rest the appeal of your film. Preserve a rapid tempo with short well-cut flashes.

## How Anthony Adverse Was Cut

Continued from page 345

so desirable. Each scene must be judged and trimmed in relation to the scenes immediately following and preceding.

Cutting must be in keeping with the nature of the picture. A fast-galloping comedy or action reel must be made up of short, fast cuts to attain the tempo. To the contrary, a deeply dramatic story requires longer scenes and gentle transitions. In the "Dream" picture, we employed rhythmic cutting conforming with the music.

There is no better way to learn film cutting and editing than to study well-edited pictures. When you see a picture that you enjoy more than the average, go back to your theater and see it another half-dozen times. The story will soon become familiar and you can concentrate on the mechanics of the film's construction.

Study the film from a cutting standpoint. There is a good reason for every cut you see. Figure out what that reason is and just why each scene is as it is. Judge it in its own behalf and in bearing to the story's unfolding. Note where the close-ups are placed, to punctuate and italicize the narrative. Find out for yourself how greatly cutting influences the appeal of the picture.

In this manner, you will quickly discover most of the tricks of the trade, the proved policies of cinematic con-

struction. You will understand how important is the infinite variety of camera angles and focal distances; how imperative is the need for breaking up your story into many terse paragraphs.

"Anthony Adverse" has many scenes in many sequences. A single straight-line sequence may comprise an entire picture for you. The same cutting fundamentals apply to both cases.

## Making the Clouds Roll By

Continued from page 344

seconds; notice how the same sky appears darker when an upward angle was used.

Figures 1 and 2 show how a cloud alters its shape in the space of three seconds. To continue with your filming, take your watch, if it has a second hand, and touch the starting button once every second for one hundred times. This will expose one hundred frames, enough for your first test and the projected pictures will show a slow, even movement if only one frame has been exposed at a time. After a little practice you will find it easy to count seconds without your watch. When choosing the location, include the roof of a building in your picture or a tree with leaves that are not fluttering in the breeze, as any movement in the foreground is fatal if you want to show ocrobotic clouds.

## The Camera Goes to See

Continued from page 348

the hip-booted clam digging fraternity ond such contributions of warm human interest. Close shots of interesting and colorful types are taken to be cut in later.

You can catch "grab shots" of the natives in work attire and, on Sundays, in their "store clothes" for contrast. Normal life in the villages contains far greater picture potentials than streets of the average city.

But make something unusual out of—to you—the usual. There lies the pleasure of this filming. Very deliberately sleuth about for pictures. With the newly opened eye of the picture seeker you will ramble leisurely about in a country of greatly enhanced beauty and interest. You will re-discover the attractions of your hallowed haunts.

Chances ore you will be surprised at the number of most acceptable subjects that your camera encounters. But you must do more than merely take views of the guide book variety. Let your imagination have unhampered swing.

Lean to the artistic side of your nature.

Distant fields always look greener to the cinematographic hobbyist. But on every side of us, fairly staring us in the face and begging to be filmed, are settings of inexpressible photographic beauty if we will but permit our cameras to see them under complimenting light conditions.

## Shooting 16mm at the South Pole

Continued from page 347

Getting these shots was a problem, for the fiercely blown snow would fill the lens-hoods so quickly we could get no pictures. Finally we hit on a simple gadget which enabled us to get our shots easily. We simply put the camera in a rather long box, open at one end so the lens could look out into the storm, yet be protected from the gale. Inside the box, beside the camera, we put an electric fan. When we shot the scene, the breeze from the fan, in the restricted area of the box, was just enough to blow the snowflakes away from the lens. In our shot, we can see the whirling, blowing snowflakes—but they don't come in to block up the lens.

Don't ask me about the matter of editing the film! You know what a job it is to edit a few hundred or a few thousand feet of vocation film; imagine the task of editing 42,000 feet! It was a job I could not delegate to anyone else, so for better than three solid weeks I labored day and night assembling three 2,000-foot pictures—and I still have enough interesting footage left over to make as many more.

I assembled three separate pictures to appeal to three definite types of audience. The first, for the general public, confines itself to generalities and to the human-interest phoses of the expedition. The second, for showing in schools and high schools, tells much the same story, but with more stress placed on educationally informative factors. The third, for college groups and scientific societies, places yet more stress upon the scientific activities of the expedition: the geological, geographical and meteorological studies, the cosmic-ray work, and so on.

All of the pictures begin with the party's londing on the ice, unloading the ships, setting up the portoble buildings, constructing the ice-block airplone hangars, and so on. Then come intimate scenes of the expedition's life: how we lived, and what we did. Finally are scenes of some of the exploratory activities: scenes of some of the airplane and tractor expeditions, building Admirol Byrd's advance camp, where he spent so many months alone, and of the porty which dashed out to rescue him. At every point, I have tried to emphasize the human side of our life and work at Little America.

And that, I think, is the way I would try to build a movie of any activity, from a simple fishing trip to an important exploration. By all means show where you go and what you do—but if you want o really successful film, tie it together with human interest shots that tell who did it and how they lived.

## Amateur Filmers Throng to Junior Society

Continued from page 352

one of them do you want to predominate? To do all of the work for that man would not be helping him. He should do a bit of thinking for himself or he will never be able to work out even the simplest continuity for himself. The Society is willing to help him over the hurdles, over the hard obstocles, but he should have more than a desire to do something; he should have the nucleus of an idea.

The Society of Amateur Cinematographers hos already given advice on certain pictures for more than half of its membership. These people wanted to moke interesting pictures of their trips, etc. Technical information has 'been passed on to them in goodly quantity. But possibly the most requested service has been the analysis of film. This analysis does not take the form of a criticism, but as the term implies the picture is analyzed. This is very important to on amateur. We all know our strengths and are proud of them, but we hate to ocknowledge our weaknesses. However, when this weakness is pointed out by the leaders in a profession we do not resent it so much, and we keep it in mind the next time we are shooting pictures.

The Society of Amateur Cinematographers seems to be destined to not only reach great numbers, but to do wonderful things for the serious amateur.

## How Short Is a "Short"

Continued from page 349

The laugh-getting effects we try to achieve with dialague con, to degree, be obtained by gag titles. Certainly, your titles should be humorous in keeping with the story.

Came next in order of appeal, scenic and travel pictures. These, too, are open to us of the personal camera fraternity. Merit rests on the unusualness or strangeness or unfamiliarity of the audience to the pictured scenes. Or, in rare and breath-taking beauty of the vistas.

As you know, much depends on the commentator with sound travelogues. Bright and sprightly comments contribute much in needed explanation, description and entertainment. The same applies to your titles. An otherwise dull or average travel reel can be elevated to high screen roting by shrewd cutting and clever titling.

Then are novelty reels. These include uncommon events and processes. The reels that Pete Smith makes are splendid examples. A ping-pong game, swimming and diving, curious industries, odd occupations, factory processes—yes, the amateur cinematographer—can be filmed to exceeding screen interest. Again, clever comment, in titles, adds much to audience enjoyment. This field is as open to the amateur as to the professional cameraman.

These are the leoding short-subject subjects. We amateurs can parallel these paths secure in the knowledge that our films will not be boring to our friends.

I would like to emphosize the need for constantly changing camera ongles and the strict avoidonce of static shots. On several occasions we have considered stories which, becouse of peculiarities of construction, would necessitate shooting the entire reel in two or three set-ups. Due to their sheer inherent story value, we have gambled and shot o couple of these stories. They were deadly on the screen—slow, draggy, uninteresting, despite the fact that there was plenty of pictured action.

The interesting slant is when we finolly adapted the stories to prevailing treatment, with its many short and fast cuts, the reel in spite of its speed gave the impression of being twice as long. Audiences lost themselves in the stary, drank heartily of the proffered entertainment, saw a fost porade of varying scenes. They got a greoter measure of enjoyment. Hence their impression of greater length.

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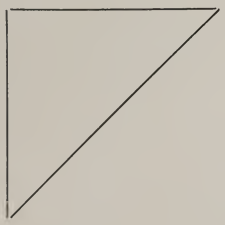
# AMATEUR MOVIE CONTEST FOR 1936...



The AMERICAN CINEMATOGRAPHER 1936 Amateur Competition is open to amateurs all over the world who use either 8mm or 16mm film.

The films must be in the offices of the AMERICAN CINEMATOGRAPHER not later than November 30, 1936.

There are no restrictions as to the number of subjects that may be entered, nor are there any restrictions as to the length of the subjects. The one strict rule that applies, however, is that no professional help is received in the making of the picture. This does not include titles which may be made at a laboratory.

The recognition of those who are given awards will be in the nature of a gold medallion which will be given by the American Society of Cinematographers who will be the judges of these pictures.

The pictures will be given classifications so that the competition may be fair to all entrants. By this we mean that an entrant having a documentary film will not compete with one who has based his on a scenario. Of course, there will be more classifications than these. The classifications will be created according to the pictures that are received.

Please remember your films must be in the office of the AMERICAN CINEMATOGRAPHER, 6331 Hollywood Boulevard, Hollywood, Calif., not later than November 30, 1936.